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**Subject:** NERL Weekly Report: January 15 thru January 19

## **NERL Weekly Report: January 15 thru January 19**

### **HOT ISSUES - *Update on any hot issues or ongoing high profile matters***

- **NERL Researchers Interviewed for NASA TEMPO Mission Video**

NERL researchers Rachelle Duvall and Jim Szykman (Exposure Methods and Measurements Division) provided interviews during the week of January 8 for an Education and Public Outreach video by NASA about their upcoming mission, *Tropospheric Emissions: Monitoring Pollution* (TEMPO). TEMPO is an instrument that will be launched in 2018/2019 to monitor major air pollutants including ozone, nitrogen dioxide, formaldehyde, particulate matter and others across North America on an hourly basis. In the interviews, EPA researchers talked about how the TEMPO mission can contribute to improved air quality monitoring and forecasting. ORD is a partner in the TEMPO mission and will be providing ground-based validation measurement support and applications development in preparation for the mission. The video will be used to spread the word about the TEMPO Mission on the web and in social media.

### **UPCOMING PUBLIC EVENTS – *Two-week outlook***

- **Overview of Upcoming Events**

- **2018 Lorentz Center Citizen Science Lab: Air Pollution:** Amsterdam, The Netherlands, 1/22/2018

- Presentation: The Efficacy of Low Cost Air Quality Sensors for Citizen Science: The Penuelas Project

- **18th National Conference and Global Forum on Science, Policy, and the Environment:** Washington, DC, 1/23/2018 – 1/25/2018

- Abstract: Ecosystem Services Education: Engaging Diverse Audiences with EnviroAtlas

- Abstract: Holistic Sustainability Assessment of Agricultural Rainwater Harvesting

#### ●■■■■■ EPA-RTP STEM Outreach Program

On January 17, EPA-RTP's Community Engagement and STEM Education Program will host ten students who are learning about Agriscience at Camelot Academy in Durham, N.C. Activities will include a campus tour, speed mentoring, and hands-on learning about EPA science.

Also on January 17, EPA-RTP's Community Engagement and STEM Education Program will judge student projects at the STEM Fair at the Triangle Math and Science Academy in Cary, N.C.

#### **UPCOMING MAJOR DECISIONS** – *Two-week outlook*

Nothing to report.

#### **LAST WEEK HIGHLIGHTS**

Nothing to report.

#### **ALL THE REST**

- **NERL scientists to contribute to International Space Station experiment**

NERL's Joachim Pleil (Exposure Methods and Measurements Division) has been asked by the NASA Engineering Safety Center to work on a team that will assist the Japan Aerospace Exploration Agency (JAXA) with evaluating new mono-propellants for use aboard the International Space Station. Mono-propellants are used for refueling Free Flyers, which are small vehicles used to move satellites and experimental platforms to different orbits. These new fuels are proposed to replace hydrazine, which is highly toxic. The team will develop a plan for testing different formulations of hydroxyl ammonium nitrate ( $\text{H}_4\text{N}_2\text{O}_4$ , HAN) and ammonium dinitramide ( $\text{H}_4\text{N}_4\text{O}_4$ ) for fire and explosion risk in microgravity. Pleil will participate in weekly teleconference meetings and occasional face-to-face meetings. He will also contribute to the written technical report and will discuss findings, observations, and recommendations to the review board and JAXA.

- **Overview of CSS tools recently published**

NERL and NCCT recently published the article, *Integrating tools for non-targeted analysis research and chemical safety evaluations at the US EPA* in the Journal of Exposure Science and Environmental Epidemiology. The article provides a nice overview of many CSS tools (e.g., ToxCast, DSSTox, Chemistry Dashboard, CPDat) and describes an integrated framework for using these tools to support non-targeted analysis in support of informing exposure assessment and chemical prioritization efforts. The article also describes EPA's NTA workshop and collaborative trial (ENTACT). This article could be an informative and useful resource for Program Office, Regional, and State partners. The authors of the article are Jon Sobus (NERL), John Wambaugh (NCCT), Kristin Isaacs (NERL), AJ Williams (NCCT), Andrew McEachran (NCCT, ORISE), Ann Richard (NCCT), Chris Grulke (NCCT), Elin Ulrich (NERL), JE Rager (ORISE, ToxStrategies), Mark Strynar (NERL), and Seth Newton (NERL).